

What Is Claimed Is:

1. A multi-domain liquid crystal display device comprising:
 - first and second substrates facing each other;
 - a liquid crystal layer between said first and second substrates;
 - a plurality of gate bus lines arranged in a first direction on said first substrate and a plurality of data bus lines arranged in a second direction on said first substrate to define a pixel region;
 - a pixel electrode electrically charged through said data bus line in said pixel region;
 - a common-auxiliary electrode surrounding said pixel electrode on a same layer whereon said gate bus line is formed;
 - a gate insulator over said whole first substrate;
 - a passivation layer on said gate insulator over said whole first substrate;
 - a light shielding layer on said second substrate;
 - a color filter layer on said light shielding layer;
 - a common electrode on said color filter layer; and

an alignment layer on at least one substrate between said first and second substrates.

2. The multi-domain liquid crystal display device according to claim 1, further comprising;

a storage electrode connecting said pixel electrode below said passivation layer and overlapping said gate bus line.

3. The multi-domain liquid crystal display device according to claim 1, further comprising;

a storage electrode connecting said pixel electrode below said passivation layer and overlapping said common-auxiliary electrode.

4. The multi-domain liquid crystal display device according to claim 1, wherein said pixel electrode overlaps said common-auxiliary electrode.

5. The multi-domain liquid crystal display device according to claim 1, wherein said light shielding layer overlaps said common-auxiliary electrode.

095518010249

6. The multi-domain liquid crystal display device according to claim 1, wherein said pixel electrode is not overlapping said common-auxiliary electrode.

7. The multi-domain liquid crystal display device according to claim 6, wherein said light shielding layer overlaps said pixel electrode.

8. The multi-domain liquid crystal display device according to claim 6, wherein said gate insulator and passivation layer are formed in an area except said common-auxiliary electrode.

9. The multi-domain liquid crystal display device according to claim 1, wherein said common-auxiliary electrode is electrically connected to said common electrode.

10. The multi-domain liquid crystal display device according to claim 1, further comprising;
a dielectric frame for distorting electric field on said pixel electrode.

11. The multi-domain liquid crystal display device according to claim 1, further comprising;
a dielectric frame for distorting electric field on said common electrode.

12. The multi-domain liquid crystal display device according to claim 1, wherein said pixel electrode has an electric field inducing window inside of itself.

13. The multi-domain liquid crystal display device according to claim 1, wherein said passivation layer has an electric field inducing window inside of itself.

14. The multi-domain liquid crystal display device according to claim 1, wherein said gate insulator has an electric field inducing window inside of itself.

15. The multi-domain liquid crystal display device according to claim 1, wherein said common electrode has an electric field inducing window inside of itself.

16. The multi-domain liquid crystal display device

according to claim 1, wherein said color filter layer has an electric field inducing window inside of itself.

17. The multi-domain liquid crystal display device according to claim 1, further comprising;
an over coat layer on said color filter layer.

18. The multi-domain liquid crystal display device according to claim 17, wherein said over coat layer has an electric field inducing window inside of itself.

19. The multi-domain liquid crystal display device according to claim 1, wherein said passivation layer includes a material selected from the group consisting of BCB (BenzoCycloButene), acrylic resin, and polyimide compound.

20. The multi-domain liquid crystal display device according to claim 1, wherein said passivation layer includes a material selected from the group consisting of silicon nitride and silicon oxide.

21. The multi-domain liquid crystal display device

according to claim 1, wherein said common-auxiliary electrode includes a material selected from the group consisting of ITO (indium tin oxide), aluminum, molybdenum, chromium, tantalum, titanium, and an alloy thereof.

22. The multi-domain liquid crystal display device according to claim 1, wherein said pixel electrode includes a material selected from the group consisting of ITO (indium tin oxide), aluminum, and chromium.

23. The multi-domain liquid crystal display device according to claim 1, wherein said common electrode includes ITO (indium tin oxide).

24. The multi-domain liquid crystal display device according to claim 1, wherein said pixel region is divided into at least two portions, liquid crystal molecules in said liquid crystal layer in each portion being driven differently from each other.

09255130 022499

25. The multi-domain liquid crystal display device according to claim 1, wherein said alignment layer is divided into at least two portions, liquid crystal molecules in said liquid crystal layer in each portion being aligned differently from each other.

26. The multi-domain liquid crystal display device according to claim 25, wherein at least one portion of said at least two portions of the alignment layer is alignment-treated.

27. The multi-domain liquid crystal display device according to claim 25, wherein all portions of said at least two portions of the alignment layer are non-alignment-treated.

28. The multi-domain liquid crystal display device according to claim 1, wherein said liquid crystal layer includes liquid crystal molecules having positive dielectric anisotropy.

29. The multi-domain liquid crystal display device

09255180.02499

according to claim 1, wherein said liquid crystal layer includes liquid crystal molecules having negative dielectric anisotropy.

30. The multi-domain liquid crystal display device according to claim 1, further comprising:

a negative uniaxial film on at least one substrate.

31. The multi-domain liquid crystal display device according to claim 1, further comprising:

a negative biaxial film on at least one substrate.

32. The multi-domain liquid crystal display device according to claim 1, wherein said liquid crystal layer includes chiral dopants.

33. A multi-domain liquid crystal display device comprising:

first and second substrates facing each other;

a liquid crystal layer between said first and second substrates;

a plurality of gate bus lines arranged in a first

09255180.02499

Sub 17

direction on said first substrate and a plurality of data bus lines arranged in a second direction on said first substrate to define a pixel region;

a pixel electrode electrically charged through said data bus line in said pixel region; and

a common-auxiliary electrode surrounding said pixel electrode on a same layer whereon said gate bus line is formed.

34. A multi-domain liquid crystal display device comprising:

first and second substrates facing each other;

a liquid crystal layer between said first and second substrates;

a plurality of gate bus lines arranged in a first direction on said first substrate and a plurality of data bus lines arranged in a second direction on said first substrate to define a pixel region;

an n-line thin film transistor at a crossing area of said gate and data bus lines;

a pixel electrode electrically charged through said data bus line in said pixel region;

a common-auxiliary electrode surrounding said pixel

PATENT

electrode on a same layer whereon said gate bus line is formed;

a gate insulator over said whole first substrate;

a passivation layer on said gate insulator over said whole first substrate;

a light shielding layer on said second substrate;

a color filter layer on said light shielding layer;

a common electrode on said color filter layer; and
an alignment layer on at least one substrate between said first and second substrates.

00255400 "022405